CLAIMS

What is claimed is:

1. A method of mapping at least one web service to at least one OSGi service, the method comprising:

creating a proxy bundle corresponding to the at least one web service;

registering a proxy web service corresponding to the proxy bundle in a service registry;

searching for the at least one web service in the service registry;

returning a reference to the proxy web service from the service registry in response to the searching; and

invoking at least one method on the returned reference, thereby invoking the at least one web service.

2. The method of claim 1 wherein the creating comprises:

retrieving WSDL of the at least one web service; and

parsing the retrieved WSDL to get a list of packages used by the at least one web service.

3. The method of claim 2 further comprising:

saving the retrieved WSDL in a JAR file.

4. The method of claim 3 wherein the saving comprises:

storing the list of packages in a bundle manifest corresponding to the proxy bundle..

5. The method of claim 2 further comprising:

optimally generating class files that correspond to the WSDL rather than using existing class files.

6. The method of claim 1 wherein the registering comprises:

using a list of properties from the proxy bundle as service properties.

7. A method of exposing at least one local service as at least one web service, the method comprising:

receiving a call for the at least one web service, where the call comprises a request and a response;

delegating the call to a client bundle;

obtaining the at least one local service from a service registry via the client bundle;

invoking at least one method on the at least one local service via the client bundle; and

returning a response from the invoked method for the at least one web service.

8. The method of claim 7 wherein the receiving comprises:

identifying a client that sent the call; and

checking if at least one client bundle for the client exists.

9. The method of claim 8 wherein the identifying comprises:

using HTTP basic authentication.

10. The method of claim 7 wherein the delegating comprises:

creating a client bundle that is not persistent and that does not register services for other bundles to use.

11. The method of claim 7 wherein the delegating comprises:

identifying a client that sent the call by a user id that the client is using to make the request.

12. The method of claim 10 wherein the creating comprises:

registering a web service client service in a service registry.

13. The method of claim 12 wherein the registering comprises:

using the web service client service to route the request to the client bundle.

14. The method of claim 7 wherein the obtaining comprises:

organizing services in namespaces of the form /ws/sid/$sid, wherein $sid comprises a sid of an exposed service.

15. The method of claim 8 wherein the delegating comprises:

if at least one client bundle for the client exists, forwarding the request to a web service client service registered by the at least one client bundle.

16. The method of claim 15 wherein the delegating further comprises:

if at least one client bundle for the client does not exist,

instantiating a client bundle for the client; and

forwarding the request when the instantiated client bundle registers a web service client service in a service registry.

17. The method of claim 7 wherein the invoking comprises:

using a class loader of the at least one local service to instantiate and reflect on all classes referenced by the at least one local service.

18. The method of claim 10 wherein the creating comprises:

creating a union of all permissions that correspond to a client and groups to which the client belongs; and

adding the union to a permission administration service for the client bundle.

19. A system of mapping at least one web service to at least one OSGi service, the system comprising:

a creating module configured to create a proxy bundle corresponding to the at least one web service;

a registering module configured to register a proxy web service corresponding to the proxy bundle in a service registry;

a searching module configured to search for the at least one web service in the service registry;

a returning module configured to return a reference to the proxy web service from the service registry in response to the searching; and

an invoking module configured to invoke at least one method on the returned reference, thereby invoking the at least one web service.

20. A system of exposing at least one local service as at least one web service, the system comprising:

a receiving module configured to receive a call for the at least one web service, where the call comprises a request and a response;

a delegating module configured to delegate the call to a client bundle;

an obtaining module configured to obtain the at least one local service from a service registry via the client bundle;

an invoking module configured to invoke at least one method on the at least one local service via the client bundle; and

a returning module configured to return a response from the invoked method for the at least one web service.

21. A computer program product usable with a programmable computer having readable program code embodied therein of mapping at least one web service to at least one OSGi service, the computer program product comprising:

computer readable code for creating a proxy bundle corresponding to the at least one web service;

computer readable code for registering a proxy web service corresponding to the proxy bundle in a service registry;

computer readable code for searching for the at least one web service in the service registry;

computer readable code for returning a reference to the proxy web service from the service registry in response to the searching; and

computer readable code for invoking at least one method on the returned reference, thereby invoking the at least one web service.

22. A computer program product usable with a programmable computer having readable program code embodied therein of exposing at least one local service as at least one web service, the computer program product comprising:

computer readable code for receiving a call for the at least one web service, where the call comprises a request and a response;

computer readable code for delegating the call to a client bundle;

computer readable code for obtaining the at least one local service from a service registry via the client bundle;

computer readable code for invoking at least one method on the at least one local service via the client bundle; and

computer readable code for returning a response from the invoked method for the at least one web service.